

Claims Previously Withdrawn

33. (withdrawn) A method of forming a structure on a substrate, the method comprising:

- a) depositing a first dielectric layer on a substrate;
- b) depositing a second dielectric layer on the first dielectric layer, wherein the first and second dielectric layers comprise materials having dissimilar etching characteristics;
- c) depositing a third dielectric layer on the second dielectric layer, wherein the second and third dielectric layers comprise materials having dissimilar etching characteristics and wherein the first and third dielectric layers comprise materials having similar etching characteristics;
- d) depositing a hard mask layer on the third dielectric layer, wherein the second dielectric layer and the hard mask layer comprise materials having similar etching characteristics;
- e) depositing a first photoresist layer including a first via pattern having a predetermined width X on the hard mask layer;
- f) anisotropically etching the first via pattern through the hard mask layer;
- g) removing the first photoresist layer from the hard mask; and
- h) depositing a second photoresist layer including a trench pattern, having a predetermined width Y such that X exceeds Y by a predetermined measure Z, overlaying the via pattern on the hard mask layer and forming a second via pattern, whereby the trench pattern and the second via pattern are adapted for forming a dual damascene structure.

34. (withdrawn) The method of claim 33 further comprising:

- a) anisotropically etching the second via pattern through the third dielectric layer;
- b) anisotropically etching the trench pattern through the hard mask layer and simultaneously anisotropically etching the second via pattern through the second dielectric layer, and
- c) anisotropically etching the trench pattern through the third dielectric layer thereby forming a trench and simultaneously etching the second via pattern through the first dielectric layer thereby forming via hole.

35. (withdrawn) The method of claim 33 wherein Z is at least 0.02 μ .

36. (withdrawn) The method of claim 33 wherein the first and third dielectric layers comprise one or more dielectric materials selected from the group consisting of amorphous fluorinated carbon, organic spin-on materials, spin-on glass, aero-gel, poly(arylene) ethers, fluorinated poly(arylene) ethers and divinyl siloxane benzocyclobutane.

37. (withdrawn) The method of claim 36 wherein the second dielectric layer comprises one or more dielectric materials selected from the group consisting of silicon oxides, silicon nitrides and silicon carbides.

38. (withdrawn) The method of claim 33 wherein the first and third dielectric layers comprise Black Diamond™.

39. (withdrawn) The method of claim 34 additionally comprising simultaneously filling the trench and the via hole with a conductive material, whereby a dual damascene structure is formed.

40. (withdrawn) The method of claim 39 wherein the conductive material comprises one or more materials selected from the group consisting of metals, alloys, metallic superconductors and nonmetallic superconductors.

41. (withdrawn) A device comprising:

- a) a dielectric stack comprising a plurality of dielectric layers including an etch stop layer;
- b) a first region in the stack defining a first trench positioned on the etch stop layer;
- c) a second region in the stack defining a second trench positioned on the etch stop layer;
- d) a third region in the stack contacting the first trench and defining a first via hole underlying the first trench;
- e) a fourth region in the stack contacting the second trench and defining a second via hole underlying the second trench; and
- f) a sacrificial etch segment in the etch stop layer positioned between the first and second trenches, wherein: (1) the first trench and first via hole, and (2) the second trench and the second via hole are adapted for forming a first dual damascene structure and a second dual damascene structure.

42. (withdrawn) An apparatus for controlling the formation of a fabricated structure on a substrate, the apparatus comprising:

- a) at least one controller adapted for interacting with a plurality of fabrication stations including: (1) a first fabrication station for forming a dielectric stack including an etch stop layer, (2) a second fabrication station for forming a sacrificial etch segment in the etch stop layer, (3) a third fabrication station for forming a first trench on the etch stop layer, (4) a fourth fabrication station for forming a second trench on the etch stop layer, (5) a fifth fabrication station for forming a first via hole underlying the first trench and (6) a sixth fabrication station for forming a second via hole underlying the second trench, and
- b) a data structure which causes the controller to control the formation of the fabricated structure.

Amended Current Status Of The Claims

Claim 1 (currently cancelled)
Claims 2-4 (previously cancelled)
Claims 5-7 (currently amended)
Claim 8 (original)
Claims 9-11 (currently amended)
Claim 12 (currently cancelled)
Claim 13 (previously amended)
Claim 14 (previously cancelled)
Claim 15 (previously amended)
Claims 16-18 (original)
Claim 19 (currently amended)
Claims 20-22 (previously cancelled)
Claim 23 (original)
Claim 24 (previously amended)
Claims 25-27 (original)
Claim 28 (currently amended)
Claim 29 (previously amended)
Claim 30 (original)
Claims 31,32 (previously cancelled)
Claims 33-42 (previously withdrawn)